Washington State Department of Health

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West Nile Virus Newsletter

This is an electronic publication designed to keep you informed on issues of interest related to West Nile virus (WNV) in Washington, and provide current information to assist you in developing a response plan to WNV in your jurisdiction.

Latest News

Yakima — Results of preliminary state Department of Health laboratory tests show a 36 year-old Yakima County man is very likely the state's first human case of WNV infection. The case will be listed as "probable" until confirmatory testing can be performed at the Centers for Disease Control and Prevention (CDC). The man was hospitalized when he first became ill in early August, and is now recovering.

Surveillance News

Surveillance Activity in Washington

In Washington, local health jurisdictions and volunteers have submitted 606 birds for WNV testing this year. **All have been negative for the virus.** In addition, 34 horses from 18 counties have been tested with no positive findings. The Department of Health (DOH) is also preparing to initiate some limited testing of mosquito pools in September focusing on *Culex tarsalis* and *Culex pipiens.*

As of August 11, local health jurisdictions and DOH Communicable Disease Epidemiology have investigated at least 32 suspected cases of human WNV. Twenty-eight cases have been ruled out as WNV infections by testing at the DOH Public Health Laboratories, and four cases have tests results that are pending

National Surveillance Activity

The following information summarizes WNV surveillance data reported to CDC through the national reporting system (ArboNET) as of August 13, 2003.

During the week of July 31-August 6, 109 human cases of WNV infection were reported from 13 states (Colorado, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Nebraska, New Mexico, North Dakota, Ohio, South Dakota, and Texas), including four fatal cases from three states (Alabama, Colorado, and Texas). During the same period, WNV infections were reported

in 622 dead birds, 191 horses, one dog, four unidentified animal species, and 359 mosquito pools.

During 2003, a total of 393 human cases of WNV infection have been reported from Colorado (195), South Dakota (51), Texas (39), Louisiana (21), Mississippi (14), Pennsylvania (12), Alabama (10), Ohio (7), Minnesota (7), Nebraska (6), North Dakota (6), Florida (4), Iowa (4), Kentucky (3), New Mexico (3), Wyoming (3), Kansas (1), Oklahoma (2), Arkansas (1), Georgia (1), Missouri (1), South Carolina (1) and Wisconsin (1). Of the 393 cases, nine fatal cases were reported from Alabama (2), Colorado (5), and Texas (2). Among 150 cases for which demographic data were available, 81 (54%) occurred among men; the median age 45 years (range: 17 months--87 years). Additional information about nationwide WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://www.nwhc.usgs.gov/research/west_nile/west_nile.html.

Local Health Focus – Thurston County Public Health

Submitted by L. Darrell Cochran, Thurston County Public Health

The Thurston County Health Department has developed a WNV response plan that is modeled after the Washington State Mosquito-Borne Disease Response Plan. However, the phased response section has changed to fit the county's own coordinated response. The plan has three key components: 1) public information, 2) surveillance, and 3) control. These strategies are designed to promote public cooperation and personal responsibility in reducing man-made mosquito habitat and using personal protection. The plan encourages the cooperation and assistance of the public, other local, state, and federal government agencies, veterinarians, and physicians in WNV surveillance to implement control measures using an integrated pest management approach. Under the plan, control is used only when the highest risk category is confirmed.

The public education campaign started in the spring with local television shows explaining the disease transmission and control measures for WNV and providing information resources for both the public and governmental agencies that wish to pursue aquatic mosquito control. WNV brochures were obtained from DOH and provided to local city and county agencies for distribution to their employees and the general public. The Thurston County Web site, www.co.thurston.wa.us/health/welcome.html, also provides information of WNV and provides links to other important resources.

The Thurston County response plan places a weighted effort on dead bird surveillance as a disease identification strategy. To enhance the effort, a WNV dead bird response line was set-up for the public to report bird deaths. A digital mapping system was also developed to track and analyze the dead bird data reported to the county. A local agreement between Animal Services and the county was established to assist in the pickup, delivery, and storage of dead birds prior to shipment to Washington State University for testing. To date, we have received 184 dead bird reports and have shipped 43 for testing.

In June, county staff participated in mosquito surveillance training provided by federal mosquito experts at Ft. Lewis, to help enhance the county's ability to identify problem areas. The county is assessing some of the county owned storm water facilities for mosquito identification in

preparation for aquatic mosquito control if it becomes necessary.

WNV surveillance linkages were also established with the medical community and local veterinarians through the health officer, Dr. Diana Yu. The contacts in both fields are designed to provide critical information that will help guide the application of the Thurston County response plan.

If you want additional information about the program please contact L. Darrell Cochran at (360) 754-3355 x 7524 or e-mail at cochrad@co.thurston.wa.us.

Communicable Disease Epidemiology Update

West Nile Virus and Blood Banks – Reporting in Washington

During 2002, WNV infection was detected among people who had recently received blood transfusions. Investigations found that infected blood donors with no symptoms had spread the virus. To protect the blood supply, new tests (nucleic acid amplification tests [NAATs]) have been developed for blood banks to screen donated blood for WNV. These tests are not yet licensed and are being used on an investigational basis, so how well they detect WNV infection is not yet known. However, a number of sites across the US have already seen test results that were falsely positive, so the results of NAATs are considered preliminary. Confirmation of WNV infection requires testing of the donor's serum for WNV antibody, and donors who are reactive by NAAT will be asked by blood banks to return for serologic testing.

FDA and CDC recommend that blood banks: 1) screen potential donors for symptoms of illness; 2) provide information to donors encouraging them to report unexplained illness with fever, headache, or other symptoms of WNV infection that occur within one week of their donation; and 3) quarantine potentially infectious blood when appropriate.

CDC also drafted recommendations to assure that blood banks and public health departments notify each other of potential infection in donors or recipients that would warrant follow-up. In response, Office of Communicable Disease Epidemiology (CD Epi) has contacted the four largest blood banks in Washington (Puget Sound Blood Center, Cascade Regional Blood Center, Inland Northwest Blood Center, and Pacific Northwest Region American Red Cross). They have agreed to report the following information (at a minimum) to CD Epi when they identify a donor with WNV infection by NAAT: 1) donor's age or date of birth, gender, and zip code; 2) date of donation; 3) test results to date; 4) travel history in the two weeks before reactive test result.

In turn, CD Epi will notify local health jurisdictions if any of their residents identified by blood banks as having WNV infection. CD Epi will notify blood banks of any Washington donor reported as having confirmed WNV infection who gave blood within 28 days before the onset of their illness. If you are contacted by a blood bank regarding a donor with WNV infection, please report the result to CD Epi so we can coordinate our interpretation of the results and the planned response.

More information about blood safety and WNV is available at:
http://www.fda.gov/oc/opacom/hottopics/westnile.html
http://www.cdc.gov/ncidod/dvbid/westnile/index.htm

Mosquito Focus – *Aedes cinereus*

Aedes cinereus is an opportunistic species that can be found in a wide range of larval habitats but prefers woodland and open meadow pools. It can be found in transient water situations, including floodwater areas and cattail swamps. Larvae are present in early spring at lower elevations through late June at higher elevations. Larvae are quite small compared to other species and tend to aggregate within dense stands of aquatic vegetation. Dipping close to emergent vegetation enhances the chances of collecting this species.

The greatest number of adults usually occurs in spring at higher elevations, however, they can re-appear in late summer depending on weather and water availability. In some mountain areas it is the dominant species and a serious pest. The species has a short flight range and adults rest near the ground in grass or underbrush near their breeding location. Aedes cinereus is an aggressive biter that will bite anytime during the day. It is known as an ankle biter as it usually focuses feeding activity toward the lower extremities. The species is common in Washington and one of the species from which WNV has been isolated in other states.

Colorado Cases Increasing

WNV is hitting Colorado harder than other states so far this year. For this year the state health department is reporting 154 cases and four deaths as of August 7. Viral activity is heaviest around areas of irrigated farmland and river valleys. *Culex tarsalis*, the mosquito identified with the highest number of virus-positive pools in Colorado, is wide spread in Washington. For more information about WNV in Colorado go to www.cdphe.state.co.us/dc/zoonosis/wnv/wnvhom.html. The June 5, 2003 issue of the WNV Newsletter www.doh.wa.gov/ehp/ts/Zoo/WNV/Newsletters/June503.pdf has information on *Culex tarsalis*.

CDC Emphasizes Prevention and Control

The following is excerpted from an August 8, 2003 New York Times article entitled "WEST NILE MOVING FASTER AND WIDER" by Andrew C. Revkin:

The outbreak of West Nile virus infection this summer is more broadly dispersed and accelerating earlier than it did last year, making it vital that more communities work to prevent mosquitoes from biting and breeding, federal health officials said yesterday.

The officials focused their message on states that are experiencing big outbreaks for the first time like Colorado and states like New York that had past outbreaks but have seen no illness so far in 2003.

"The time for people to really be conscientious about taking the steps necessary to protect themselves from mosquito bites is right now," Dr. Julie L. Gerberding, Director of the Centers for Disease Control and Prevention, said at a news conference in Atlanta.

The big pulse of infections is yet to occur, she said, urging communities and individuals to use insect repellants containing DEET, remove standing water, repair screens, and try to stop all other contact between people and mosquitoes.

Communities should generally understand that methods to prevent the infection, particularly in the most vulnerable population, the elderly, "are straightforward stuff," said the New York City health commissioner, Dr. Thomas R. Frieden.

Municipalities would do well to use larvicides that prevent new generations of mosquitoes, he added, saying extensive spreading of a natural product, a bacterium that kills just mosquito larvae, had greatly reduced mosquito numbers around New York.

West Nile Research

Scientists and health experts at the National Institute of Allergy and Infectious Diseases (NIAID), along with public health officials, have enhanced research on WNV. The effort is part of NIAID's comprehensive emerging infectious disease program, which supports research on bacterial, viral and other types of disease-causing microbes. Research is underway to develop a vaccine, antiviral medicines, and new diagnostic tests for WNV. Additionally, basic research is providing new clues about the virus itself, the disease in humans and animals, and how the virus is maintained in the environment. This knowledge is essential to developing prevention, treatment and control strategies. For a more detailed description of research projects go to: www.niaid.nih.gov/factsheets/westnile.htm.

Multilanguage West Nile Information

CDC's West Nile website www.cdc.gov/ncidod/dvbid/westnile/index.htm has links to public information about WNV in Spanish, French, Chinese and Vietnamese.

Article Submission

We are interested in receiving articles for future publications of the WNV newsletter. Please submit articles to Jack Lilja, jack.lilja@doh.wa.gov.

Community Comments

Let us hear your comments on this newsletter, your needs, or things you would like to see, by sending them to Maryanne Guichard, (360) 236-3391 or maryanne.guichard@doh.wa.gov.

WNV Web Resources

Washington State Department of Health www.doh.wa.gov/wnv
Center for Disease Control http://www.cdc.gov/ncidod/dvbid/westnile/
Washington State University Cooperative Extention http://wnv.wsu.edu/
Cornell University, Center for Environment http://www.cfe.cornell.edu/erap/WNV

DOH Contact List for West Nile Virus

General Public Toll-Free Hotline 1-866-78VIRUS

Publications: Brochures/Response Plan/Fact Sheets
Laura Harper, (360) 236-3380, or laura.harper@doh.wa.gov.

Surveillance: Mosquito
Jo Marie Brauner, (360) 236-3064, or jomarie.brauner@doh.wa.gov.

Surveillance: Dead bird surveillance and general WNV response
Tom Gibbs, (360) 236-3060, or tom.gibbs@doh.wa.gov.

Surveillance: Horses, case reporting, laboratory assistance
Dr. John Grendon, (360) 236-3362, or john.grendon@doh.wa.gov.

NPDES: Training, technical assistance
Ben Hamilton, (360) 236-3364, or benjamin.hamilton@doh.wa.gov.

WNV in Humans: Clinical information, case reporting, and laboratory testing
Call your local health jurisdiction or DOH Communicable Disease Epidemiology, (206) 361-2914 or (877) 539-4344.

Assistance with news releases and media response
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